Neonatal Opiate Withdrawal Syndrome (NOWS)

Over the last ten to fifteen years, there has been a tremendous increase in the rate of Neonatal Abstinence Syndrome (NAS), which is now being renamed Neonatal Opiate Withdrawal Syndrome (NOWS) in infants born to mothers who use opiates during pregnancy.[1] A good part of this increase has been driven by the escalating use of prescription narcotics. However, heroin is cheaper, stronger, and often easier to buy, so the movement to heroin is not surprising.

Men are more likely to be heroin users than women. However, data from our programs that are screening pregnant women for substance use demonstrate that women whose partners have a drug or alcohol problem are more likely to be drinking alcohol or using illicit drugs than women whose partners do not have a drug or alcohol problem. This correlation, along with the close proximity of the average age of 23 for starting opiate use and the median age of 25 for a woman giving birth to her first child, is helping drive current reports of escalating numbers of newborns affected by heroin exposure.

Opiate use during pregnancy can result in the physical dependence of both the mother and the fetus. After birth, the newborn infant goes through withdrawal, known as NAS, which mimics narcotic abstinence in an adult. The most significant features of NAS are a high-pitched cry, sweating, tremulousness, scratching of the skin, vomiting, and diarrhea. However, multiple systems are affected, which can lead to a range of complications:

- Neurologic signs – increased muscle tone, tremors, increased reflexes, irritability and restlessness, high-pitched cry, sleep disturbances, seizures
- Autonomic system dysfunction – yawning, sneezing, sweating, nasal stuffiness, low-grade fever, skin mottling
- Gastrointestinal abnormalities – diarrhea, vomiting, poor feeding, regurgitation, uncoordinated suck and swallow, failure to thrive
- Respiratory abnormalities – rapid breathing or cessation of breathing for short periods
- Neurobehavioral problems – irritability, poor response to visual or auditory stimulation, inability to control level of arousal
- Miscellaneous – scratching of skin with abrasions on knees, elbows and chin from rubbing on the bed sheets.

Symptoms of neonatal withdrawal from heroin may be present at birth, but they sometimes do not appear until three to four days of life. The withdrawal symptoms peak around six weeks of age and can persist in a more subtle form for four to six months or longer. The infants also may demonstrate many of the same problems as other prenatally exposed infants, including low birth weight, prematurity, muscle tone changes, and infant neurobehavioral problems.

[1] We will use the classic term of "NAS" in this paper, emphasizing, however, that NAS occurs only in those infants whose mothers have used opiates during pregnancy.

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Treatment of neonatal abstinence primarily is supportive – swaddling, use of a pacifier, and small frequent feedings. In some cases, withdrawal may be severe enough to warrant use of medication to help the newborn through the worst symptoms. Most commonly, morphine or methadone in small doses is used to calm the infant and enhance his or her ability to feed, sleep, and interact appropriately with the caregiver.

The other concern, of course, is the chance the newborn could have been exposed to a maternal infection while in-utero. All infants whose mothers have a history of illicit drug use should be tested for HIV and Hepatitis C infection if the mother has not been tested or if the mother is positive.

Several states are now looking at policies and practices aimed at addressing opiate use in pregnancy and NAS. These policies need to incorporate the needs of the mother as well as the welfare of the infant. Punitive approaches that threaten incarceration and automatic removal of the child and placement into the child welfare system do no good and, in many cases, are counterproductive because they drive pregnant women out of prenatal care. Rather, programs that provide gender-specific treatment to pregnant and parenting women and support attachment and bonding between mother and infant have the greatest long-term positive impact. These programs are costly, but we have to pay for these programs now, or pay much more later.

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